

The economic case for health targets on grocery retailers

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Targeting the health of the nation: an economic assessment

Nesta has proposed a policy that aims to address the rising prevalence of obesity by introducing targets for large grocery retailers to improve the healthiness of their offer. To ensure the policy would not be unduly burdensome to the food industry or raise food prices, we wanted to explore the economic costs of this policy both to businesses and the consumer.

Nesta commissioned an expert, Daniel Gordon, to assess the economic case for this policy. Daniel Gordon was Senior Director of Markets at the Competition and Markets Authority between 2014 and 2023. Prior to that he was Chief Economist at the UK Competition Commission and Director of Competition Policy at Ofcom, having previously held senior posts at the Office of Fair Trading and HM Treasury.

His report assesses the potential costs of the policy for both retailers and suppliers, the impact of subsequent costs to consumers and the resulting impact on competition in the retail market. The assessment also compares these cost implications to other obesity-related regulations.

Executive summary

- Nesta's proposed regulatory target would work by changing the incentives of the large grocery retailers to improve the overall healthiness of the food they sell. Unlike much regulation, it does not prescribe rules for businesses to adhere to, but instead specifies a clear measurable outcome in terms of retailers' average sales.
- This outcome-based regulation offers significant advantages. It provides confidence that the regulation will be effective in generating the desired outcomes in terms of health improvements, while also providing retailers with the flexibility to find the most cost-effective ways to enhance the healthiness of their sales.
- Retailers are in a far better position than the government or a regulator to determine the best ways to improve the healthiness of their food sales, in terms of minimising the costs to businesses, as well as the costs and disruption to consumers. The target will provide a clear binding incentive for them to do so.
- **The introduction of the regulatory target is not expected to have significant cost implications for the majority of grocery retailers.** Some retailers are already operating very close to the target and are likely to be able to meet the target with relatively little change needed to their current operations. A comparison of current performance suggests that those with more work to do can achieve this without significant detriment to their business.
- **The target should not have a significant impact on costs of consumers' shopping,** either in terms of the prices in stores or by causing them to switch to higher price products. Competition will lead grocery retailers to find ways to meet the target that will be best-received by their customers, both in terms of choice of the products they offer and the cost of their shopping.
- Set against the very large benefits of reducing obesity and recognising the pivotal role that large grocery retailers play in shaping the nation's diet, there is a compelling case for this policy to be seriously considered.

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Introduction

The proportion of the population now living with obesity has almost doubled in the last twenty years. It is estimated that about 26% of the English population can currently be classified as obese, compared with about 15% in 1993.¹ Obesity generates considerable costs to the economy. A recent study by Frontier Economics estimates that **obesity and overweightness together cost the UK almost £100 billion in 2021,² which is equivalent to over 4% of GDP** – with obesity accounting for three-quarters of this. The impact on individual quality of life accounts for the largest proportion of the estimate, but the direct costs to the NHS are also very significant (£19 billion). These figures offer an evidence-backed basis for gauging the potential benefits of reducing obesity rates. They indicate that a 23% decrease in obesity could yield about £20 billion in benefits and save the NHS approximately £2.9 billion. These are the scale of benefits to bear in mind when assessing the potential costs of policy interventions, such as Nesta’s proposal for a mandatory health target for large grocery retailers (For more information on Nesta’s proposal, see [Targeting the health of the nation: a policy brief](#)).

Large grocery retailers have a pivotal role in determining what people eat, and measures that can effectively encourage the larger grocery retailers to improve the overall nutritional value of the food they sell to consumers are a very effective means to reduce obesity across the country. **About 80% of food consumed in the UK is consumed at home³, and the large majority of food eaten at home has been purchased at one or more of the largest supermarkets in the UK.** Nesta has estimated that approximately 90% of food entering people’s houses in the UK has been purchased at the 11 largest supermarkets.⁴ This is the basic premise for applying a regulatory health target to the largest food retailers.

This paper sets out the economic case for applying regulatory targets to the largest retailers as a means of reducing obesity in the UK and considers the potential impact on business and consumers.

This paper does not purport to provide a fully quantified cost-benefit assessment of the impact of introducing the policy. The assessment here is based on information that is readily available. In particular, because the impact of the policy depends critically on how the supermarkets adapt to the new regulation, a fuller assessment will need to get their views on the ways that the target will affect how they run their businesses, the costs associated and the most effective ways of mitigating any harmful effects.

Despite this, we can get a good indication of the scale of its impact by identifying the main ways that introducing the target will affect businesses and consumers, and assessing the magnitude of each. As a result, there are still meaningful high-level conclusions that can be drawn about the scale of the impact of the policy.

¹ NHS England. 2021. *Health Survey for England*

² Frontier Economics. 2023. [The Rising cost of obesity in the UK](#).

³ Figures based on National Diet and Nutrition Survey Years 1-9, 2008/09 – 2016/17.

⁴ Nesta estimates based on analysis of Kantar Worldpanel Division Data (2021)

Section 1: The rationale for a mandatory health target on grocery retailers

The pivotal role that large grocery retailers play in shaping the nation's diet is the core premise for applying a mandatory health target. As set out in the [policy brief](#), under such a target, the 11 largest retailers would be required to ensure that the nutritional value of their total food sales meets a prescribed level of healthiness as defined by a nutrient profiling model (NPM) score.⁵ The target is intended to be mandatory. The largest retailers would be required to measure and monitor the nutritional value of all their food products and provide regular reports to a regulatory body. The regulatory body would be responsible for monitoring compliance with the regulation and have powers to impose sanctions in the form of fines when a supermarket's sales over the period fall outside the regulatory bounds (for more information on the implementation of the policy, see *Targeting the health of the nation: an implementation plan for government*).

The Targets policy is an example of outcome-based regulation, meaning it explicitly does not place any additional constraints on the supermarket's sales processes or behaviours, but instead monitors the end results or outcomes of their activities in terms of overall nutritional value in order to assess compliance. This type of regulation aims to change how firms behave and the impact of their actions by altering their incentives. There are very significant advantages to adopting an outcomes-based regulatory approach in the way proposed in this context, both in terms of the effectiveness of the policy in delivering the desired outcomes, as well as in terms of the costs involved for doing so. These include the following:

- **Ensuring confidence that the policy will improve outcomes and its magnitude of impact.** This policy provides this confidence by defining the outcome in terms of a single unambiguous quantitative measure that applies across the entire business, a sales-weighted average NPM score. Nesta research shows that there is a strong link between NPM score improvement, calorie reduction and subsequent obesity reduction (for more information, see [Targeting the health of the nation: technical appendix](#)). As such, the target is closely aligned with the desired policy objective of improving the healthiness of food sold in retailers.⁶ If, by contrast, a regulator tried to pursue this goal by setting rules for retailers' behaviour, while it might be reasonably confident that those rules would lead to improved outcomes relative to the status quo, it often cannot be definite about the magnitude of that improvement.

⁵A nutrient profiling model (NPM) score is a holistic measure of health that assigns an integer score to food products based on their nutritional content (energy; sugar; saturated fat; sodium; protein; fruit, vegetables and nuts; fibre). The NPM was originally developed by the Food Standards Agency to determine the suitability of products for advertising to children.

⁶ Alongside an NPM-based target, Nesta has also considered alternative formulations for the target such as calorie density. A further advantage of the NPM-based approach is that, because it draws together the main relevant parameters affecting healthy eating, it has some flexibility built into it, and there is room to refine the detailed methodology underlying it as appropriate, without compromising the clarity and up-front transparency of the target.

- **Reduced risk of circumvention by businesses**, as seen with rules-based regulatory approaches where businesses can often find ways to minimise the impact of policies while still complying with the letter of the regulation. For example, there is evidence that, despite legislation restricting the placement of high fat, salt and sugar (HFSS) products in prominent areas in stores (such as end-of-aisle), some retailers have maintained high visibility of these unhealthy products by introducing in-aisle displays, floor stickers or placing pallets of HFSS foods in scattered locations throughout the store.⁷ This risk does not arise with outcomes-based regulation where the regulated firms know that they are held to account for the outcomes achieved.
- **Allowing flexibility for policy goals to be met with minimum necessary cost to business.** There are a multitude of approaches that supermarkets can take to adjust the balance of sales to meet the target, including product reformulation, promotional activity, advertising changing displays and changing prices. Retailers themselves can determine the most cost-effective ways to use these approaches to meet the target and minimise the impact on consumer shopping bills and food choice.
- **The ease of monitoring compliance.** A retailer's compliance with the proposed target can be tracked simply by monitoring a single measure: its NPM score. By contrast, ensuring compliance with rules governing selling processes, such as limiting how unhealthy products are displayed in store, often involves some form of monitoring of branch-level activities, which by its nature is a much more granular exercise.
- **Increased senior level oversight** of progress against target and responsibility for ensuring compliance compared to rules-based regulation⁸. A supermarket's NPM score will become a key performance indicator (KPI) for the supermarket and be closely monitored by its Board of Directors alongside its other KPIs.

Overall, there is a very strong rationale for applying an outcome-based approach to regulation in this context. Once in place, there can be a high level of confidence that it will deliver the benefits intended, in terms of improving the balance of purchases from retailers. But it will also mean that the costs to business and disruption to consumers can be kept to a minimum.

⁷ Location, location, location. Exploring the impact and implementation of the promotion of high in fat, sugar and salt products by locations legislation in England.

https://foodactive.org.uk/wp-content/uploads/2023/11/Location_Location_Location_Winter2023_FINAL.pdf

⁸ [Black, Hopper and Band. 2007. *Making a Success of Principles-based Regulation*.](#)

Section 2: The impact on business

We now turn to look at the potential impacts of introducing a health target on business. As set out above, this paper does not purport to provide a quantified cost-benefit assessment of the impact of introducing the policy. Moreover, to a major extent, the business impact of the policy depends on how the retailers are able to adapt in order to meet the regulatory target. Ultimately, it is only the retailers themselves that can know the impact on their business of introducing the regulatory target.

We should, however, be able to gain a good indication of this by identifying the range of ways that the introduction of the target might affect them and then assess the magnitude of these impacts. We can also compare the current activities of different retailers to see whether this gives insights into the potential business response to the proposed measures.

Moreover, even though the assessment of costs here is indicative in nature, it can be anchored in three meaningful ways:

Firstly, in relation to the magnitude of the overall benefits that are likely to ensue from this policy. Nesta has estimated that a target set close to the level of the current best in class retailers would potentially reduce obesity by approximately 23%. Following the earlier discussion, the economic benefits that would result from this can be estimated to be around £20 billion in total, of which about £2.9bn take the form of direct saving to the NHS.⁹ **At risk of stating the obvious, these are very large sums and there is no question that the overall costs of the policy are well below this.** As a result, there is also no doubt that it can be expected to generate very sizable net benefits.

Secondly, the costs and effectiveness of this policy can be compared to alternative policy options for addressing obesity. Given the scale of the benefits to be gained, many alternative policies will also generate benefits that outweigh their costs. Given this, there is value to be gained in comparing the relative costs and effectiveness of the different policy alternatives. A high-level comparison of the proposed target on retailers with other policy options is provided below (see Section 3: Comparison to other policies).

Thirdly, both the costs and the impacts of this policy are to a high degree scalable depending on the level at which the target is set. A target that is very close to the current levels achieved by retailers will be associated with lower costs than a more stringent target. It will however also have less impact on obesity, and hence also be associated with lower benefits. A meaningful impact assessment will therefore need to be based on a specific level for the NPM target. The discussion here is based on a converted NPM target of 69 proposed by Nesta, which is broadly in line with the current levels of NPM of better performing retailers¹⁰.

⁹ Calculation based on Frontier Economics modelling of £97.8 billion annual cost of adult obesity to society which includes estimated costs from NHS, social care and lost productivity, and wider costs to the individual calculated using Quality Adjusted Life Years (QALYs) modelling.

¹⁰ For this target, Nesta has utilised a commonly used converted version of the Food Standards Agency NPM score developed by the University of Oxford to improve interpretability, whereby a score of 1 is the least healthy, and a score of 100 is the most healthy (For more information, see the [technical appendix](#)).

We now turn to look at the impact of the policy on business, focussing first on the largest retailers and then on their suppliers.

Impact on retailers

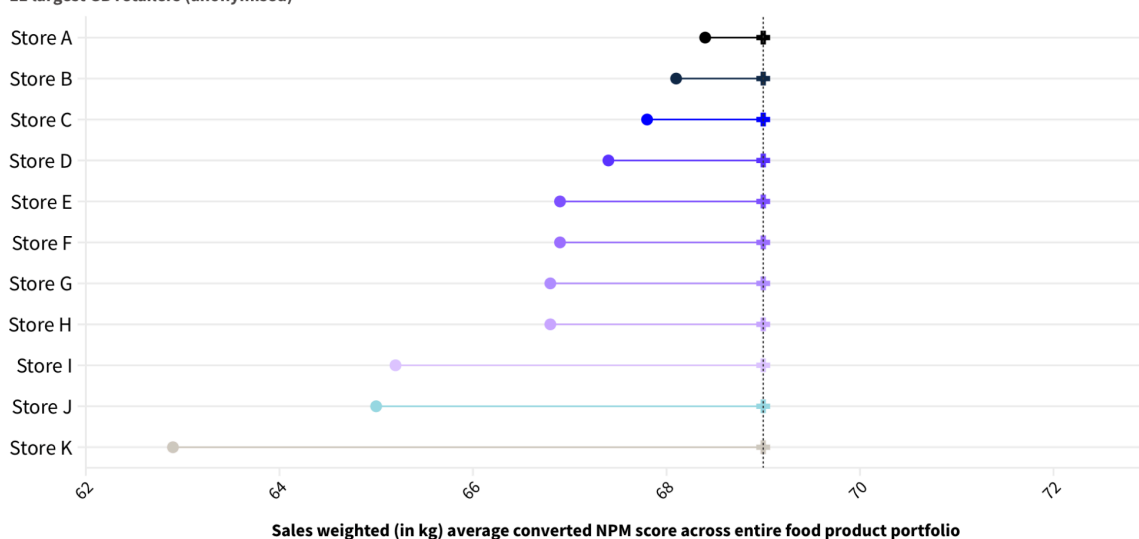
Current performance relative to the target

A natural place to start to gauge the potential impact on retailers is by looking at how close their current sales are to the proposed NPM target of 69. Other things being equal, the closer a retailer's current NPM score is to the target, the less the expected effect on their business. On the other hand, if the NPM score of a retailer's current sales are substantially below the planned target, then it is more likely to need to make more significant changes in order to comply.

Figure 1: Target and current sales weighted (in kg) average converted NPM score by retailer

Legend: + target • current

11 largest GB retailers (anonymised)



Source: Nesta analysis of Kantar's Worldpanel Division Data (2021)

Analysis by Nesta, set out in Figure 1, shows how close the 11 largest grocery retailers currently are to an NPM target of 69. The diagram shows the following:

- Retailers' performances on this metric varies, but a target at this level is very close to the levels currently achieved by the "best in class" retailers, stores A-C.
- The 10 out of the 11 retailers currently have NPM scores within about 5% of the target, and to meet the target, these retailers will need to make an average increase of 2.3% to their scores.
- Only one retailer (store K) is outside that range, with an NPM score below about 8% of the target. For this retailer, the introduction of the target is likely to have a more significant impact.

The 11 anonymised stores in Figure 1 include online retailers, discounters and major supermarkets (including their smaller convenience or local branches). Notably, the average health scores currently achieved by the discounters¹¹ and those of the majors¹² are very similar (see Table 2 below). This suggests that **the introduction of an NPM target should not affect discounters and their shoppers to any greater degree than the major supermarkets and their shoppers** (for more information, see section ‘Does the current evidence suggest that shopping costs more at retailers with higher NPM scores?’).

Potential costs to retailers of complying with the target

The costs supermarkets will incur in having to comply with the regulation can be separated into two different categories:

- *substantive compliance costs* – that result from supermarkets having to change their practices to meet the health target
- *administration costs* – that result from having to set up reporting systems to demonstrate compliance with the regulation.

Substantive compliance costs

Because the target works by setting an incentive for the supermarkets rather than prescribing rules to change their behaviour, there is a huge amount of flexibility in the approaches they choose to comply. In very broad terms, supermarkets can improve the nutritional offering of their products in the following ways:

- Product reformulation – changing recipes to make products healthier and reducing portion sizes
- Availability – purchasing and stocking healthier products
- Promotion – excluding/including price and volume promotions on unhealthy/healthy foods to encourage/discourage their purchase
- Advertising healthier food to shift consumer purchasing.
- Placement – using in store product placement to purchase healthier items.

Different supermarkets can be expected to adopt different approaches depending on how effective each is in moving the balance of their sales towards the NPM target, the costs involved with doing so and their individual business models and consumer base.

While it is not possible to predict exactly how each retailer will respond, it is reasonable to assume that retailers will look for ways to affect the change needed to their sales in order to meet the target that involves least disruption to their customers. Improving the availability of healthy products and reducing the availability of unhealthy products is one potential way of achieving this, but if consumers are not attracted to those products, then it will not be effective and could lead consumers to go elsewhere and switch to a store that contains a range of products that is more attractive to them. On the other hand, by focusing advertising and promotional activity on healthy foods (or away from unhealthy foods), retailers can try to make consumers more receptive to such products. For example, a recent study found that

¹¹ E.g. Aldi and Lidl.

¹² E.g. Sainsbury’s, Tesco, Asda and Morrisons.

retailers' [price-promotional activity tends to be more heavily focused on unhealthy foods](#), suggesting that there is significant scope for reorienting such activity towards healthy foods¹³. Nonetheless, meeting the target in this way would still require changing the choices of consumers.

Supermarkets have responded to previous interventions by finding ways of improving the nutritional value of their existing products rather than trying to change consumer's choices. In particular, as academic studies of the sugar tax on soft drinks and policies to reduce salt consumption find that the industry response was primarily through product reformulation rather than by changing consumer choice to alternative products. For example, [Dixon, Gershitz and Kemp \(2021\)](#) found that about 80% of the reduction in sugar consumed as a result of the soft drinks industry levy (SDIL) was the result of manufacturers reformulating products, while only 18% was the result of consumers switching away from levied drinks. [Scarborough et al. \(2020\)](#) similarly find that the sugar tax led to widespread product reformulation by soft drinks manufacturers. Furthermore, by tracking weekly data between September 2015 and February 2019, they find that the prior announcement of the policy provided manufacturers with the ability to reformulate their products ahead of the tax being introduced.

A study of the industry response to an earlier government policy initiative to reduce salt consumption had similar findings. In 2003, the UK government set a target to reduce salt consumption in adults to 6g per day, from an average at the time of 9.4g per day. There were two elements to achieving this. First, the government encouraged voluntary reformulation by food manufacturers to reduce the salt content of their products. Secondly, it ran a public awareness campaign to alert consumers to the health risks from high salt intake. [Griffith et al. \(2014\)](#) find that, between 2005 and 2011, the salt content in the average supermarket basket reduced by about 5%. Moreover, they find that this was entirely the result of product reformulation by manufacturers, giving examples such as Unilever reducing the salt intake of its Pot Noodles by 50% and PepsiCo reducing the salt levels of its snack and crisps range by 55%.

There are, however, differences between the policy being considered here and those considered in these studies that could mean that supermarkets might employ a wider combination of measures alongside product reformulation to meet the target. Neither of these policies were targeted directly at supermarkets but were instead more focused on food and drink suppliers. And unlike the sugar tax on soft drinks, this policy would apply to all food sales in supermarkets and will therefore cover a much wider range of products.

This could mean that **there is greater potential for steering consumers to healthier alternatives in addition to reformulating products**. And in pursuing the salt reduction target after its introduction in 2003, public information campaigns were used in order to try to change consumer choice. While the evidence suggests that these were largely ineffective, it is expected that retailers will be in a much better position to influence consumer choice than the government. Not only do they have many more ways to do this open to them (such as targeted advertising, product promotions, stocking and display decisions), but they will also

¹³ [Research by the Food Foundation](#) in 2024 found that an estimated 41% of price promotions and 33% of advertising placed on unhealthy foods compared to just 3.3% and 1% respectively for fruit and vegetables.

have much greater familiarity with their customer base and awareness of what it is likely to be responsive to, as well as the ability to track the effectiveness of different measures in real time. In short, **retailers are in a far better position than the government or a regulator to determine what works for driving consumer behaviours and purchasing.**

It is also important to recognise that, to varying extents, each of these activities together with their associated costs are core parts of a retailer's day-to-day business. Given this, the new requirement to meet a regulatory target will eventually come to be factored into the firm's strategy towards each one of them, rather than being seen as an additional element with an additional cost.

As shown in Figure 1 above, almost all retailers are already achieving NPM scores relatively close to the planned target of 69, with some already almost reaching the target. Furthermore, the analysis shows that retailers generally regarded as close competitors can have significantly different NPM scores. This might be taken to indicate that most supermarkets should be able to meet the targets without major adjustments to their current practices and without significant increases in their costs.

The diagram also shows that one of the eleven retailers appears to be an outlier, currently having a significantly lower NPM score than others. This retailer is likely to need to take more extensive action in order to comply with the regulation. The phased introduction of a target, as proposed, will mitigate this impact significantly, by allowing time for more substantial changes to their business model to be introduced gradually, in a way that minimises the effect on costs. The extent to which this is not the case will become clearer through the consultation process required prior to enacting the regulation. In this, each retailer will have the opportunity to provide an evidence-based response setting out their views on the costs of the transition period required to mitigate the risk of cost increases.

Administration costs

In order to comply with the new regulatory requirement, the larger retailers will need to put in place systems to monitor the NPM scores of all the food products they sell. These systems will need to be independently verifiable to provide sufficient assurance to the regulator as to the coverage and accuracy of the information they are providing.

Implementing and maintaining systems to achieve this should not be a substantial exercise. **Retailers are already required to keep track of the NPM scores of some of their products in order to comply with** existing regulations that restrict the promotional activity and positioning of HFSS¹⁴ foods. To some extent the necessary systems will therefore already be in place. The existing systems will need widening in scope to the degree that supermarkets do not currently measure NPM scores for all food products, but the costs of doing this should not be substantial. The information required is not extensive and clearly circumscribed by the information required by the NPM model. It is also worth noting that there are wider benefits to be gained from making reporting on nutritional value

¹⁴ See [The Food \(Promotion and Placement\) \(England\) Regulations 2021](#)

commonplace in other health policies. For example, the NPM score has already been adopted by Transport for London as part of its [advertising policy](#) and also by the republic of Ireland to place limits on [HFSS advertising to children](#).

Conclusion: overall costs to supermarkets

The above discussion implies that the costs to supermarkets of implementing the regulation should generally not be substantial, especially when set against their overall revenues, let alone the scale of the wider economic benefits generated. Because the regulation is tightly defined about a single measure, the NPM score, the administrative burden on firms to demonstrate compliance should be very low. Moreover, the substantive compliance costs that result from having to change their practices in order to comply with the target are not expected to be large for the majority of supermarkets that are already operating close to the proposed target level. Allowing for the phased introduction of the policy with a suitably determined transition period will mitigate the cost impact to all retailers, particularly for those where greater changes to their business models are needed.

The above discussion has not regarded the risk of fines for not meeting the target as a further cost to business. Box 1 below explains the reasoning for this and also why such fines are not expected to increase costs to consumers.

Box 1: Should regulatory fines be treated as costs to business and/or consumers?

The policy proposes that supermarkets that do not comply with the target can potentially be fined up to 1% of their UK turnover. Given this, it can be asked whether the risk of fines should be treated as a potential additional cost to business.

It is true that if supermarkets were not expected to comply with the target and be subject to regular fines, these would become an additional cost to their business. The aim of the policy, however, is for supermarkets to comply with the nutritional target. The fining powers are required only to provide a “hard” incentive for this to happen. Fines are only expected to be levied infrequently (if ever), and only on those supermarkets that have not complied with the regulation.

In theory at least, a supermarket can choose either to comply with regulation with associated costs of doing so or not to comply and accept a fine. Since it is one or the other, to include both the compliance costs as well as the potential risk of fines as business costs would therefore be double-counting. Moreover, to be effective, the risk of potential fines needs to be greater than the costs to businesses of complying with the regulation, otherwise supermarkets would find it cheaper to accept the fine than to comply. Since the costs of compliance are the lower of the two options, they are also the right costs to use to assess the costs on business.

In general the costs to supermarkets of complying with the target are not expected to be large for the majority of supermarkets. To the extent that the costs of compliance are higher for some supermarkets than others, the regulator has discretion to take account of extenuating circumstances. Fines, such as those being proposed here are well-established elements of most regulatory regimes, where the law can give regulators the ability to set fines for regulatory breaches at levels of up to 10% of a firm’s global turnover.

In practice, however, fines are set at levels well below this maximum, and regulators provide guidance setting out the factors that they take into account when assessing whether a financial sanction is necessary and, if so, the size of the fine. These typically include: the magnitude and duration of the breach, whether it was intentional, whether it is recurring, whether steps have been taken to prevent or remedy it, and the level of cooperation provided by the firm.

Fines for regulatory breaches are also not intended to impact consumers and be passed on as higher prices. In practice, the fines set by regulators are very modest compared with overall turnover. Even so, **individual firms have very little ability to pass on increased prices without losing profits. This is particularly true when markets are competitive, such as groceries.** As a final safeguard, if there were a risk of fines being passed on to consumers, then the regulator would be expected to exercise its discretion in deciding whether that was the right course of action.

For these reasons, the risk of regulatory fines is not regarded here as an additional cost either to businesses or to consumers.

Impact on suppliers

Although the target is directed at retailers, there will also be an indirect effect on food producers and manufacturers who supply food to the retailers. In particular, it will benefit manufacturers of healthy foods and disadvantage manufacturers of food with low nutritional value. The extent to which this happens will depend in part on how much retailers change their product purchasing, placement, promotion and advertising decisions as a result of the target. As set out above, for most retailers, there is reason to believe that the target can be reached without major changes to their current practices and will not involve a radical change to retailers' current activities. On this basis, it can also be said with a reasonable degree of confidence that the target will not imply structural change across the food supply sector, such as who is in the sector and how big their business is.

However, it is likely that producers whose production activities are largely focused on unhealthy products will be more impacted than others. For these particular producers, the introduction of a target increases the incentive to innovate to reformulate their products in ways that improve nutritional value as well as refocusing their product portfolio towards healthier products.

Studies looking at previous interventions aimed at dietary improvement have found that affected suppliers have responded strongly to policies that disincentivise consumption of unhealthy foods by extensive product reformulation.¹⁵ They also show that allowing for an implementation period between the announcement of the policy and its implementation enabled manufacturers to undertake substantial product reformulation ahead of time for when the policy was implemented.

While there might still be some effect on some suppliers, this could be mitigatable to a significant degree by allowing a phased implementation.

¹⁵ See studies on manufacturer's reformulation response to the soft drinks industry levy by Gershitz and Kemp (2021) and [Scarborough et al. \(2020\)](#).

Section 3: Impact on costs to consumers

We now turn to consider the potential impact of the measure on consumers; in particular whether it is likely to increase their weekly food bill. The introduction of a health target on supermarkets could in principle increase the costs to consumers in two ways:

- Firstly, by increasing the prices of the food products contained in their shopping basket. If the target in any way led to food prices being higher than they currently are, it would also be expected to increase costs to consumers.
- Secondly, if the composition of consumers' shopping baskets needed to be changed towards higher priced products.

Will the introduction of a target increase food prices?

The introduction of a regulatory target could change the prices that retailers charge their customers in the following three ways:

1. If the target led to **higher costs to retailers** that are then passed on to consumers;
2. If the target **reduced competition** between supermarkets, that could enable them to earn higher profits and charge higher prices to consumers
3. If the target led to increased demand for healthy products, suppliers and producers of these products could find themselves in a stronger negotiating position with the supermarkets leading to **higher supply prices for healthy products**, which will be passed on to consumers as higher prices.

Pass-through of business costs to consumers

The discussion in Section 2 suggested that the phased introduction of a nutritional target should not generally lead to a rise in business costs of a scale that will lead to increases in consumer prices. First of all, the large majority of supermarkets will be expected to absorb the target within their business operations without any increase in costs, other than the very modest additional costs needed to meet the administrative requirements (which are likely to be negligible compared to overall sales revenues). Furthermore, to the extent that one or two supermarkets did experience more substantial cost pressures as a result of having to make greater changes to their business, since the costs involved largely affect their fixed costs (advertising, product redevelopment, etc.) rather than their variable costs, this should not have a major effect on the prices they charge.

Impact on retail competition

The UK grocery market is widely regarded as being competitive. Supermarkets compete at the national level, in terms of their brand position and also to the extent that they adopt a national pricing policy (charging the same prices in all their stores). In addition, they compete at the local level against other stores located nearby.

The Competition Markets Authority's (CMA) most recent assessment of the groceries sector¹⁶ found the following:

- There have been significant changes in the market shares of the largest supermarkets over the last 10 years
- Supermarkets that have priced lowest (the discounters) have taken market share from others
- Supermarkets that have allowed their prices to be materially higher than competitors have tended to lose market share
- Supermarkets closely track each other's prices to ensure they remain competitive
- Supermarkets had responded to recent increases in supply costs following the Russian invasion of Ukraine by accepting reductions in their margins rather than passing them on in full in higher prices to consumers.

The central driving force for this is consumer choice, in particular that consumers readily switch to different supermarkets on the basis of price. The CMA reported that there was good evidence of consumers shopping around to find the best deals, for example research by Kantar found that, on average, consumers use at least [three different retailers](#) in any given month.

There is no reason to expect the introduction of a regulatory health target on supermarkets to reduce price competition. Consumers will continue to shop around the best deals, and this will remain a constraint on any individual supermarket raising its prices.

The target is also not expected to significantly impact competition on factors other than price. Although it would potentially limit a supermarket's ability to differentiate itself from its competitors by offering an overall less healthy range of products, there are a multitude of other ways by which supermarkets can differentiate themselves. Importantly, the target will not stop supermarkets continuing to compete by providing a healthier product range than their rivals insofar as this is valued by their customers. In terms of their product ranges, supermarkets will continue to compete on the basis of range and quality, such as the proportion of fresh food, freshly baked products, delicatessen service, etc. Alongside differentiating themselves in terms of their product ranges, supermarkets compete in many other ways (for example, product and service quality, promotions, loyalty programmes) that will be unaffected by the introduction of the target.

Because the target only applies to larger retailers, it will affect their competitive position in relation to smaller groceries, who will not be subject to the regulation. This is, however, not expected to have a significant impact on the overall level of competition in the grocery sector. Past investigations by the CMA have concluded that the competitive forces in the market operate asymmetrically in the sense that while larger stores impose a competitive constraint on smaller stores, smaller stores do not impose a competitive constraint on larger grocery stores¹⁷.

¹⁶ See for example views summarised in "Competition, Choice, and Rising Prices" CMA 2023

¹⁷ See for example the CMA's decision on the proposed merger between [Sainsbury's and Asda, 2019](#)

There is therefore no reason to expect the introduction of a target to lead to higher prices as a result of a detrimental effect on competition. Moreover, the competitiveness of the sector means that individual supermarkets are very constrained in their abilities to pass on cost increases to consumers.

Impact on the wholesale price of “healthy” food

There is also no reason to expect the introduction of a target to lead to an increase in the wholesale price of healthier foods. In the short term, it is possible that suppliers of relatively healthy products will be in a position to negotiate higher wholesale prices, as the target increases demand. But this should not be a long-lasting phenomenon. As discussed below, the policy will incentivise food manufacturers to increase the supply of healthy products, and the balance of negotiating power is expected to return to its original position. Moreover, through a phased introduction of the target, as is being proposed, it should be possible to avoid even short-term increases in product costs, by allowing supply to adjust before the supermarkets are subject to the formal regulation.

Conclusion: impact of a target on supermarket prices

There is therefore little to suggest that the target will cause prices in supermarkets to increase. Retail competition is expected to remain as strong after the introduction of the target as it is now, and short-term upward pressures on wholesale prices should be mitigated through the phased introduction of the target. It is possible that certain supermarkets will face greater upward cost pressures than others. Even so, the impact on prices on these stores is still unlikely to be significant, as in large part the target will not affect their variable costs. Moreover, the retail prices of these supermarkets will still be constrained by competition.

Will the target shift consumers towards higher priced food?

Overall, the regulatory target should not have a significant impact on the prices facing consumers on supermarket shelves. Costs to businesses should not increase significantly, and to the extent that they did, should not be passed on to consumers.

Even so, their overall shopping bill could still increase due to changes in the composition of products in their shopping baskets.

The most immediately obvious means by which to meet the target is through increasing the proportion of healthy food in consumers’ shopping baskets by encouraging them to substitute some of the unhealthy products they buy with healthier alternatives. If, however, the prices of healthier alternatives are higher than their current purchases, then the overall cost of their supermarket shop will also increase.

It is often thought that healthy food is more expensive than unhealthy food. Indeed, a number of studies have argued that the price of healthy food is currently substantially higher than unhealthy food. For example, a recent study by [the Food Foundation](#) found that healthy foods are over twice as expensive per calorie as unhealthy food. At face value, this could be taken to imply that increasing the proportion of healthy food in shoppers’ baskets could substantially increase their overall food bill.

The applicability of this study to the current context is, however, very limited for a number of reasons. Most importantly, it is based on a binary classification between “healthy” and “unhealthy food”. Compliance with the proposed NPM target can be achieved by making relatively small changes to food purchases or product formulation and can be achieved without necessarily implying major switches between the two product categories.¹⁸ As shown above, an NPM target of 69 on total sales does not imply a major change for the large majority of supermarkets and their customers. A target at this level should not therefore imply a major shift in consumer purchasing habits. It should be achievable through incremental adjustments to people’s shopping habits or by making incremental product reformulation to improve the nutritional content of the food being offered.

Does the current evidence suggest that shopping costs more at supermarkets with higher NPM scores?

It is impossible to know with full confidence exactly how people will adjust their buying patterns following the introduction of the NPM target. This will depend both on the way that supermarkets choose to implement the target and on shoppers’ willingness to replace certain products in their basket.

A good place to start, however, is by looking at current practices. In particular, we can look at whether consumers now tend to have to pay more for their shopping at supermarkets with higher NPM scores.

The consumer organisation Which? regularly tracks the average cost of comparable shopping baskets in the larger supermarkets. To compare prices between supermarkets, Which? identifies commonly purchased products and determines the cost of a shopping basket comprising these in each supermarket. Table 1 sets out the Which? findings for 2021, the same time period used for deriving NPM scores.

¹⁸ Also the metric used in this price comparison is cost per calorie. Since unhealthy food is typically associated with higher calorific value, a comparison on this basis is expected to show a substantially bigger price difference between healthy and unhealthy food than a comparison made on the basis of standard units of consumption.

Table 1: Which? average costs of shopping basket (September 2021)

Supermarket	Cost of Basket (£)
Aldi	24.03
Lidl	24.40
Asda	26.19
Sainsbury	27.95
Morrisons	28.31
Tesco	28.31
Ocado	29.84
Waitrose	33.06

Source: Which? ¹⁹

There are obviously a host of factors other than the nutritional value of their sales that will drive differences in the costs paid to consumers. Most notably, the supermarket sector is segmented on the basis of their different consumer bases and product ranges between the major supermarkets (Tesco, Sainsbury, Asda, Morrisons) and the discounters (Aldi, Lidl), with others (Waitrose, Marks and Spencer, Ocado) being seen as higher-end.

In order to show whether higher nutritional scores were associated with higher price, while maintaining the anonymity of the supermarkets, we have aggregated the supermarkets into two groups: major supermarkets and discounters in Table 2²⁰. As expected, the average cost of a shopping basket at the discounters is lower than the average cost of comparable baskets in the major supermarkets (£3.50 or 12.5% cheaper). By contrast the average NPM scores of the two groups, discounters and majors, are very similar. The implication is that shopping in a lower-priced supermarket, where the price of a basket of shopping is lower, does not necessarily come at the cost of lower nutritional value.

Table 2: Average price of shopping basket and NPM score, major supermarkets and discounters

	Major supermarkets	Discounters
Price of average shopping basket	27.7	24.2
Average NPM score	67.2	67.1

Source: Which? and Nesta

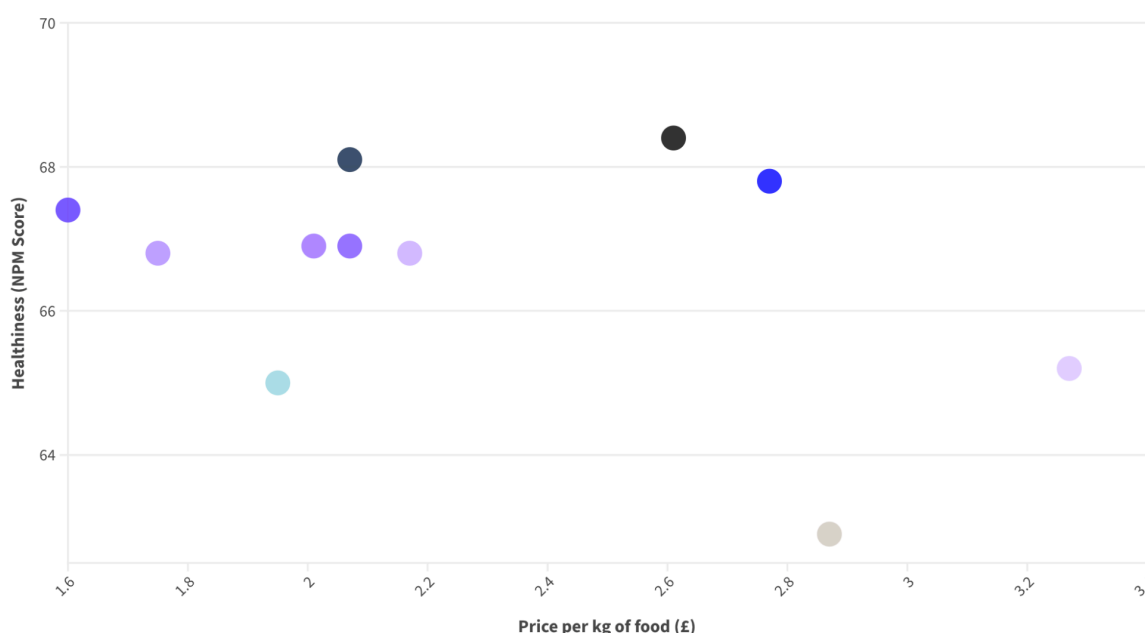
¹⁹ Which? shopping basket comparisons are based on the prices of 22 standard shopping items, including own-brand and common branded products. Which? also provides a comparison for the average cost of a shopping trolley, with a wider coverage of 79 products. We use the basket comparison here because the discounters were not included in the comparison of shopping trolley prices in this period. However, the relative positions for the six other supermarkets included in the shopping trolley are the same in both.

²⁰ We do not include the premium segment in this exercise because Marks and Spencer is not included in the Which? comparisons.

The Which? comparisons in 2021 were based on only 22 products²¹. Although these were very commonly bought items, they will only represent a small proportion of supermarket sales. It is possible therefore that the results are different when the comparison involves a larger set of products.

To explore this, we can draw on the Kantar database which comprises approximately 70,000 products for all the 11 major retailers, to compare the average price of food per kilogram across these supermarkets. **Figure 2 below shows a scatter-plot of NPM scores and the average price of food purchased (£ per kg) for the 11 largest supermarkets. The diagram similarly shows no correlation between the average prices and nutritional value.** This again suggests that it is currently no more costly for consumers to shop in supermarkets with higher nutritional scores than in others.

Figure 2: Relationship between retailer NPM scores and the average price of food



Source: Analysis of Kantar's Worldpanel Division Data (2021)

Both pieces of analysis here should be regarded as indicative, rather than conclusive. The Which? comparisons have the benefit of being based on the shopping behaviour of typical consumers but are based on a very limited number of products. A headline comparison of average product prices (per kilo) has the benefit of covering a much wider range of products but also has significant limitations. A more robust comparison would need to take account of the other factors that also could be influencing the relative prices of products in different supermarkets (such as differences in product mix, for example) by econometric analysis. Even so, such analysis would still not be able to factor in the extent to which consumers' purchasing habits adjust as a result of supermarkets having to improve their nutritional scores.

²¹ Since that time Which? have also included Aldi and Lidl in their average trolley cost comparisons, which includes a wider set of 79 products.

Modelling the impact of the NPM target on consumer purchases

One way of assessing the impact of an NPM target on consumer prices and spending is modelling target-induced changes in the product mix sold to consumers. To this end, Nesta has built a model using the Kantar Worldpanel Division Data (2021)²² of existing sales to assess the different ways that supermarkets could meet an NPM target of 69 and then determine the potential impact on consumer costs. This analysis suggests that, in principle at least, the changes in consumers' shopping patterns needed to achieve an NPM target at this level are unlikely to be large. Specifically, Nesta modelled how supermarkets could achieve this target by a combination of changing the balance of sales between healthy and unhealthy products, and reformulating existing products. The Nesta model suggests that an NPM target of 69 can be met with relatively modest changes in their shopping basket, specifically through a 10.5% reduction in sales of unhealthy products, a 9% increase in sales of healthy products and relatively small reformulations to half of the supermarkets' less-healthy products.²³

Overall, the Nesta model implies that changes can be achieved with no significant increase in cost to consumers. For the reasons set out above, there are inevitably a large number of assumptions underpinning a modelling exercise such as this, and they must be treated as indicative. Most obviously, the impact on consumer costs could be different than the Nesta modelling suggests, depending on the actual costs of business compliance activities, such as reformulation or product placement.

The central difficulty in any forward-looking assessment of the impact of introducing an NPM target, including a modelling approach, is predicting to what extent and how consumer purchasing patterns actually will adjust in response to the target being introduced. This will depend on both the approaches that supermarkets take to implementing the target and their customer response to these.

Taking a step back to look at the underlying markets of the sector, as well as previous experience, there is good reason to expect the impact on consumer prices to be small. Given the competitive nature of the market, we can be confident that supermarkets will each be looking for approaches that will be well-received or minimise any negative impact on consumers, both in terms of requiring them to change their shopping habits and the prices they pay. If a supermarket were to make substantial changes to the product range it currently offers or try to push consumers towards products that they do not want, it runs a greater risk of losing consumers who have chosen their store on the basis of their current product range. Similarly, while a supermarket will be keen to look for ways to increase sales revenues, it will resist measures that increase the costs to their customers if this leads them to shop elsewhere.

Because of this, it is likely that, alongside looking at ways to influence consumer shopping habits towards healthier products, supermarkets will also look to achieve the target as much as possible by making changes to their existing products to increase their nutritional value.

²² All analysis and interpretation was conducted independently of Kantar Worldpanel. Kantar has not independently verified the findings.

²³ Modelled as a six-point increase in products with an NPM score currently at or below 62.

As discussed above, product reformulation was the main route by which the food sector responded to previous interventions. Although, the wider scope of this target implies that there is greater potential for supermarkets to steer customers towards healthier alternative products in addition to the product reformulation that will feature in the food sector's response to the policy. The potential for product reformulation will vary between products, but part of the desired changes can, in principle at least, be achieved simply by improving the nutritional content of the items that they currently buy. Moreover, evidence from a recent study in Chile found that reformulating products to be healthier did not imply an increase in prices.²⁴

Conclusion: overall costs to consumers

The discussion here, therefore, implies that the target is unlikely to result in significant, if any, increases in the costs to consumers. Introducing the regulation is not expected to cause prices to rise, and supermarkets will be strongly motivated to look for ways to comply with the target that either involve minimal disruption to their customers (in particular, through product reformulation) or by nudging them towards alternative products that they are confident will be well-received by their customers. A comparison of the current performance of different supermarkets suggests that there is considerable potential for most supermarkets to improve their overall nutritional score without increasing costs to consumers.

²⁴ "Evolution of food and beverage prices after the front-of-package labelling regulations in Chile" Paraje et al. (2023) BMJ Global Health.

Section 4: Comparison with other policies to address obesity

On the basis of the discussion here, there is good reason to believe that, compared with other policy measures to improve diet in order to address obesity, the proposed target on supermarkets is likely to be able to achieve its desired goals with less impact on business and consumers than alternative policies.

As experience of the soft drink sugar levy shows, introducing taxes on food with low nutritional value is likely to provide an effective way of improving diets. In the same manner, if set at the appropriate level, a tax applied to supermarket food sales could in principle at least achieve the same beneficial outcomes as the target.

A tax would also have an impact on consumer prices. Again, experience of the sugar levy shows that considerable proportion of the tax rise is passed through to consumers²⁵. The proposed regulatory target applies to all food sales in supermarkets. **If a tax also applied to all food products, then it would also be expected to have an equivalently greater impact on the costs of shopping.** Furthermore, because food purchases account for a larger proportion of household income for low-income households than for higher income households, a tax on food with low nutritional value would be regressive. By comparison, a nutritional target on supermarkets has the potential to achieve similarly impactful results on outcomes with substantially less impact on consumers' shopping bills.

Other measures for improving diets include rules-based regulations to change business behaviour, for example, controlling where and how certain foods are displayed in supermarkets, or restrictions on when and where they are advertising. While there is evidence that these measures have some effect in improving diets²⁶, individually they will not be as effective as an NPM target on supermarkets. The NPM target is not only wider-reaching in that it covers all sales made by the major supermarkets but, because it is outcomes-based regulation, it puts control in the hands of the supermarkets, rather than policy-makers, to identify the best means of achieving the goal.

Similarly, policies to improve information provision to consumers, while unlikely to have any effect on prices, are also limited in their effectiveness in changing diets, especially amongst the socio-economic groups most at risk from obesity.²⁷ By comparison with other policy options, therefore, a nutritional target is not only likely to be very effective as a means of improving diet but will also have much less impact on the costs of the weekly shop to consumers.

²⁵ Evidence from the sugar tax found pass-through rates to consumers ranging from 31% to 140%. [Institute of Government, 2022](#)

²⁶ For example, Dubois, Griffith, O'Connell. *The Effects of Banning Advertising in Junk Food Markets* Review of Economic Studies 2018.

²⁷ Rachel Griffith, Obesity, Poverty and Public Policy, *The Economic Journal*, Volume 132, Issue 644, May 2022, Pages 1235–1258, <https://doi.org/10.1093/ej/ueac013>

Conclusions

The costs of obesity to the UK economy, in particular the direct costs to those immediately affected, are considerable. Since supermarkets are the main “gateway” by which food reaches UK consumers, a policy intervention that has the effect of improving the nutritional value of their sales is likely to be a particularly effective way to address the rising prevalence of obesity in the country. Compared to other options, a target on the overall nutritional value of sales of supermarkets has much to recommend it, both in terms of its effectiveness in achieving its goals and in the associated impacts on consumers and business of doing so.

Because it works by changing their incentives rather than by prescribing rules, the supermarkets are able to identify the most impactful ways of changing the overall nutritional value of their sales that have the least impact on their costs. The above discussion strongly suggests that most supermarkets will be able to meet the proposed NPM target of 69 without significant cost. Some supermarkets are already operating very close to the target and are likely to be able to meet the target with relatively little change needed to their overall operations. Although the impact on supermarkets with NPM scores further from the target is expected to be greater, there is good reason to believe that they too will be able to achieve the target without significant impact on their business model with the proposed period of transition between announcement and implementation of the policy. The fact that, in each of major market segments, there are currently supermarkets operating with nutritional scores significantly closer to the proposed target than others suggests that those with more work to do can achieve this without significant detriment to their business.

One supermarket is currently an outlier in terms of having an NPM score significantly below the target. The impact on this supermarket is likely to be more significant. To understand the feasibility of implementing the target in the proposed timescale, it will be necessary to work with it to understand any challenges. Indeed, a process of consultation with the sector more widely will be important to test the broad conclusions drawn here.

Even so, the impact on all businesses will be mitigated by allowing a suitable transition period. A process of consultation will also provide the chance for food suppliers to explain the impact on them. Producers of unhealthy products will be impacted more negatively by the policy than others. The policy will, however, incentivise them to reformulate their products to have a higher nutritional content in the same way as was seen after the announcement of the soft drinks levy. It is likely that there is a subset of products where there are objective limits to how much they can be reformulated to be healthier. Ultimately, though, any measure that leads consumers to improve the healthiness of their diet will be expected to have an impact on producers of unhealthy foods.

Notwithstanding this, one can have a reasonable level of confidence that the impact on consumer prices will not be significant. Even if the target led to increased costs for some businesses, these are unlikely to be passed through to consumers. The market will remain as competitive as it is currently, and this will constrain the ability of any individual supermarket passing on increases in its cost base to consumers.

The readiness of consumers to switch where they shop will constrain supermarkets' abilities to raise prices. It will also drive the approach that supermarkets take to complying with the target. This means that supermarkets will adopt approaches that either imply very little change to their customers current shopping experience, in terms of cost and choice, or by influencing customers to change their shopping choices in ways that they are confident will be well-received.

Reducing the prevalence of obesity in the UK carries significant benefits, both to the health of the population and the wider economy. Large grocery retailers play a pivotal role in improving the nation's diet and subsequent health outcomes, and the benefits that would result from improvements in the healthiness of their sales are large. Set against the relatively small costs associated with introducing a mandatory health target to improve the healthiness of food sold by retailers, there is a compelling case for the consideration and implementation of the policy.